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T-D

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/293,669	04/16/99	DOLEMAN B	018564-00211

020350 IM52/1003
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EXAMINER	
HANDY, D	
ART UNIT	PAPER NUMBER
1743	5

DATE MAILED: 10/03/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/293,669	Doleman et al.
Examiner	**Art Unit**
Dwayne K. Handy	1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Apr 16, 1999

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-16 is/are pending in the applica

4a) Of the above, claim(s) _____ is/are withdrawn from considera

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-16 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirem

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-16 are rejected under 35 U.S.C. 101 because the claimed invention is inoperative as claimed. Applicant has claimed a "method for matching a response intensity of a sensor array to an odorant with the detection threshold of the human nose". The Examiner has read both the claims and specification and applicant appears to be claiming that a sensor array which mimics detecting odorants matches the response intensity of a human nose. Applicant has presented this argument on page 9, lines 1-10 and later again on page 10. The Examiner disagrees with the claim as written. The Examiner contends that while the device may have a response which *mimics the human nose response* (detects) at a given partial pressure of the odorant, the Examiner fails to see how this *matches* the response intensity to the human nose response. Also, since the response intensity is a measure of some type of physical quantity (light, electricity, etc.) the Examiner fails to see how this can match a detection threshold of something as complex and complicated as a mammalian organ. While not trivializing applicant's invention, the Examiner would submit that the method may detect an odorant, or a response which may then

be correlated to an odorant, but the device has not matched the detection threshold of the human nose.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-16 are also rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has claimed a method for validating that a sensor array's response intensity matches a human nose detection threshold". This is indefinite. The major question the Examiner has is: Which human nose provides the "standard threshold" for matching sensor responses to? That is, since everyone has differing senses of smell based on a wider variety of conditions and circumstances, how can one know the limits of the threshold for a given population? A given individual even?

Finally, the Examiner would ask, just what is the purpose of the method claimed by applicant? It appears to be more of a "method of calibration" for a sensor array than what is being claimed. That is, even if one could match the two things (response intensity of array and detection threshold of the human nose), what utility does this method comprise?

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

6. Claims 1-7 and 9-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Lewis et al (Pat No. 5,951,846).

7. Claims 1-7 and 9-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Lewis et al (Pat No. 5,959,191).

Both Lewis patents disclose sensor arrays for detecting analytes in which a method of detection is taught. While the Examiner previously rejected the methods for non-prior art reasons, the Examiner sought prior art which contained the structural elements recited in the method as well as a method of sensing for examination purposes. The sensors comprise first and second conductive elements separated by a resistor. The resistor is made of conducting and non-conducting regions and provides a difference in resistance in response to the presence of an analyte.

Lewis ('846) and Lewis ('191) both teach the type of sensor (chemiresistor) and materials in construction in column 4 and Tables 1 and 2. These teachings include organic polymers as claimed in claims 6 and 14 in the instant application. Also, both Lewis patents recite a wide

variety of analytes which may be analyzed using their sensor array including those recited in the instant claims (Lewis '846, column 7 and Lewis '191, column 8). As to the method itself, the Examiner refers applicant to claim 25 of Lewis ('846) and claim 34 of Lewis ('191) in which Lewis refers to exposing the sensor array to the fluid to be analyzed, recording the first and second measured resistance responses and determining the presence of an analyte based on the measured responses.

While the Examiner understands that applicant may disagree with his assessment of the instant method against this prior art, the Examiner merely wished to provide some basis for arguing the validity of the instant claims against the prior art. Simply put, it is currently the Examiner's contention that ANY sensor which operates by responding to an analyte to produce a response will meet the limitations of the instant claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Zakin et al., Beller, Hollis et al., Chung et al., Schatzmann et al., and Gibson et al. are cited as examples of devices which contain some structural features of applicant's method as well as similar methods of use.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwayne K. Handy whose telephone number is (703)-305-0211.

Jill Warden
Supervisory Patent Examiner
Technology Center 1700

dkh

October 1, 2001